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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/699,815

11/04/2003

Hiroyuki Ishida

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04/03/2006

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EXAMINER

REHM, ADAM C

ART UNIT

PAPER NUMBER

2875

DATE MAILED: 04/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/699,815

Applicant(s)

ISHIDA ET AL.

Examiner

Adam C. Rehm

Art Unit

2875

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 January 2006.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5,7 and 9-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5,7 and 9-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-5, 7, 9, 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over MURATA (US 4,935,665) and LEE (US 6,637,922).
2. MURATA discloses:
 - A semiconductor light-emitting element (Figs. 1 and 2);
 - An optical system (Fig. 1 generally) comprising a reflector (14/15, Column 3, Lines 46-48) and a rectangular lens/body that is rotationally asymmetrical relative to an optical axis (31/3/7, Figs. 14 and 16-18);
 - A focal point of said optical system being on or near a light-emitting surface (3) of said light-emitting element (Fig. 1, Column 4, Lines 32-43);
 - Said light-emitting surface having a horizontally elongated/rectangular shape in a direction orthogonal to an optical axis of said light-emitting element when viewed in the direction of the optical axis of said light-emitting element (3, Fig. 12);
 - Said optical system forming a light distribution pattern by enlarging a light pattern of said light-emitting surface in a horizontal direction (31, Fig. 14);

DETAILED ACTION

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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1. Claims 1-5, 7, 9, 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over MURATA (US 4,935,665) and LEE (US 6,637,922).
2. MURATA discloses:
 - A semiconductor light-emitting element (Figs. 1 and 2);
 - An optical system (Fig. 1 generally) comprising a reflector (14/15, Column 3, Lines 46-48) and a rectangular lens/body that is rotationally asymmetrical relative to an optical axis (31/3, Fig. 16 illustrates a rectangular/asymmetrical body filled around LEDs 2; or 7, Figs. 14, 17 and 18 illustrate a rectangular/asymmetrical body filled around LEDs 2);
 - A focal point of said optical system being on or near a light-emitting surface (3) of said light-emitting element (Fig. 1, Column 4, Lines 32-43);
 - Said light-emitting surface having a horizontally elongated/rectangular shape in a direction orthogonal to an optical axis of said light-emitting element when viewed in the direction of the optical axis of said light-emitting element (3, Fig. 12);

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- Said optical system forming a light distribution pattern by enlarging a light pattern of said light-emitting surface in a horizontal direction (31, Fig. 14);
- A plurality of semiconductor chips (2) arranged in a single line/array/rectangular matrix (Fig. 16) having a semi-cylindrical transparent member covering said semiconductor chips (Figs. 16 and 17);
- A plurality of semiconductor chips (2) arranged in an array (Fig. 16) whereby a rotationally asymmetric light intensity distribution can be obtained around the optical axis of the light-emitting element by causing a plurality or all of said semiconductor chips to radiate light (Figs. 16 and 17 illustrate an asymmetrical/oval transparent member covering said semiconductor chips that distributes light in a corresponding rotationally asymmetric/oval nature upon radiation of the chips).

3. MURATA discloses the claimed invention including a rotationally asymmetric body filled around a semiconductor chip (31/3/7, Figs. 14 and 16-18) as cited above, but does not disclose a fluorescent body. However, LEE teaches the use of a fluorescent material disposed about a light source (Fig. 1B, 2) for the purpose of enhancing the overall light intensity of the device (Column 2, Lines 33-45). It would have been obvious to one of ordinary skill in the art at the time of invention to incorporate the fluorescent material of LEE into MURATA to provide a light source with enhanced light intensity.

4. Regarding Claim 10, MURATA discloses the claimed invention as cited above, except for the ones of said semiconductor chips of different sizes. However, it would

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have been obvious to one of ordinary skill in the art at the time of invention to incorporate chips of different shapes for the purpose of projecting various light distribution patterns, since such a modification would have involved a mere change in the shape of the component. Notably, a change in form of any element of prior patent must result in more than useful natural phenomenon that man has accumulated through common knowledge. *Span-Deck Inc. v. Fab-Con Inc.*, 215 USPQ 835. Such features cannot sustain patentability where involved is only extended application of obvious attributes from prior art. *Id.* In the case at hand, the advantage of changing the shape of the chips would permit the emission of various patterns.

5. Claims 4 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over MURATA (US 4,935,665) in view of LEE (US 6,637,922) as applied to Claims 1 and 5 above, and further in view of SEGOSHI (US 4,868,726). MURATA discloses the claimed invention, but does not disclose semiconductor chips shaped and arranged to produce a projected light pattern having a cut line for a headlamp low beam. However, cut lines and the advantages thereof are well known in the art. SEGOSHI teaches a blind in order to intercept light from a low beam (6, Column 1, Lines 33-41) for the purpose of preventing dazzle or glare to oncoming traffic (Column 1, Lines 42-46). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify MURATA to include the blind as taught by SEGOSHI in order to produce a light pattern having a cut line in order to control emitted light.

Response to Arguments

6. Applicant's arguments filed 1/25/2006 have been fully considered but they are not persuasive.
7. Applicant argues that neither the MURATA lens (31) nor the LEE lens (2) is analogous to the claimed fluorescent body and asserts that these elements are analogous to Applicant's claimed lens. Notably, Applicant claims a fluorescent body and at least one of a reflector and a lens. The MURATA lens (31/3, Fig. 16) or the polymer layer (7 Fig. 14/17/18) is commensurate with the scope of applicant's claimed "body filled around said light-emitting element...having a shape that is rotationally asymmetric..."
8. The MURATA-LEE combination evidences the obviousness of adding a fluorescent material to an area surrounding a semiconductor chip in order to enhance light intensity, as noted above. Specifically, MURATA discloses an asymmetric area surrounding a semiconductor chip (31/3/7, Figs. 14 and 16-18) and LEE teaches filling the area surrounding a semiconductor chip with a fluorescent material (Column 2, Lines 33-45). The resultant is an asymmetrical fluorescent body, as claimed by Applicant.
9. Applicant argues that to fill the MURATA hollow (11) with a fluorescent material would be directly against the specific MURATA teaching. Notably, Applicant fails to provide a basis for the argument.
10. Applicant argues that the combination of MURATA and LEE would result in a lens with a fluorescent material. Examiner concurs with Applicant's admission and

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asserts that the fluorescent body, as claimed by Applicant, is a lens. As previously noted, Applicant claims a lens or a reflector.

11. In the alternative, another possible combination of MURATA and LEE results in an asymmetrical fluorescent body that is a seat. LEE clearly discloses a "seat...contain[ing] a fluorescent material" (Paragraph 2, Lines 33-34).

12. Applicant argues the inapplicability of MURATA Figure 16 and inapplicability of *Span-Deck Inc. v. Fab-Con Inc.*, 215 USPQ 835. In consideration of the patentability of a system having a collinear configuration, the court in this case applied the well-settled tenet that more than a mere change of form is necessary for patentability with such a change resulting in more than useful natural phenomenon that man has accumulated through common knowledge. *Id.* The court concluded that the particular collinear configuration appeared to be no more than a logical and obvious step forward, which accomplished no new or unexpected results. Along the same vein, it has been held that the shape of a device must be considered in determining patentability, if the shape is significant. *In re Dailey*, 149 USPQ 47 "...the configuration of the container is a 'mere matter of choice' not significantly novel..., [however,]...Appellants have provided no argument which convinces us that the particular configuration of their container is significant...").

13. Regarding Claim 1 and shape of the fluorescent body, Examiner concedes that the actual shape of the individual portions of (31/3) are likely symmetrical. However, the shape of the entire lens (31/3) and layer (7) is rectangular/asymmetrical.

14. Regarding Claim 10 and shape of the semiconductor chips, Applicant claims "...different ones of said semiconductor chips have respectively different shapes..."

Applicant provides no argument that the particular configuration is significant other than yielding an obvious result, i.e. "...to produce respective light distribution patterns..."

Such a change is well known to produce exactly this result and, therefore, is not sufficient for patentability.

15. Applicant argues that SEGOSHI does not teach a blind. However, Applicant fails to provide a basis for the argument.

16. The rejections are maintained.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

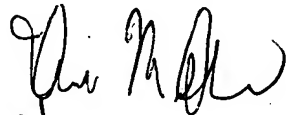
Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adam C. Rehm whose telephone number is 571.272.8589. The examiner can normally be reached on M-F 9-5:30 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on 571.272.2378. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ACR
3/21/2006


Thomas M. Sembler
Primary Examiner